RAB Minutes

NAS North Island

Restoration Advisory Board

INTRODUCTION
The sixty-second Restoration Advisory Board (RAB) meeting for Naval Air Station (NAS) North Island/Naval Amphibious Base (NAB) Coronado was held on Thursday, January 20, 2000, at the Coronado Public Library from 6:30 p.m. to 7:55 p.m. Ms. Fargo called the meeting to order at 6:30 p.m., and welcomed RAB members and the public.

RAB ATTENDANCE
Bill Collins, Daniel Cordero, Carla Fargo, Bob Geilenfeldt, John Locke, Richard Mach, Foster Marshall, Larry McCauley

PUBLIC/NAVY ATTENDANCE
Mark Bonsavage, Neal Clements, Nancy Lee, Bob Logan, Kathryn Parker, Leslie Redford, Corey Walsh, Debbie Wankier, Mark Wankier

INTRODUCTIONS
Mr. Collins introduced Mr. Dan Cordero, Department of Toxic Substances Control (DTSC's) new representative. Mr. Cordero will take the place of Mr. Rafat Abassi, DTSC's previous representative. Ms. Parker, with Bechtel introduced Ms. Leslie Redford. Ms. Redford will be maintaining the information repository in the library; she will take the place of Ms. Carol Raykowski.

APPROVAL MEETING MINUTES
The RAB members agreed to the approval of the October 21, 1999 and December 1, 1999 meeting minutes.

MEETING TOPICS
The January 20, 2000 meeting topics were Introduction to Groundwater, Site 9 Soil Vapor Extraction (SVE) with Steam Injection and Free Product Recovery Update, NAS North Island Site Management Plan, and the NAS North Island and NAB Coronado Installation Restoration (IR) Site Tour.

PRESENTATIONS
Introduction to Groundwater-Corey Walsh, Regional Water Quality Control Board (RWQCB)
The first presentation was given by Mr. Walsh, of the RWQCB, on the topic of groundwater. This training was a general introduction to groundwater geology.

Mr. Walsh started with the basic concepts of the hydrologic cycle-the water cycle. He explained the cycle begins with the transportation of water from surface waters, such as oceans, lakes, and rivers, through evaporation and transpiration through green plants. Moisture is a product of the atmosphere and it comes down to earth through rain and snow and flows back to the surface waters and accumulates into the ocean, lakes and rivers. Part of this water infiltrates back into the soil, and that's what contributes to the buildup of groundwater which then ultimately flows back to the ocean. This is an ongoing cycle. It has no beginning or end.

Statistics show that 97 percent of the water available on earth is locked up in salt water (oceans and seas); approximately two percent is found in ice caps and glaciers, and groundwater contributes to approximately half a percent. Almost 98 percent of the fresh water that is available to humans is found in groundwater, not

surface water such as reservoirs.

The top section of soil is called the vadose zone or the non?unsaturated zone, and this is where the water infiltrates from the surface of the ground, moves down through gravitational forces, and migrates to a point of saturation. That point of saturation is defined as the top of the water table. Above that, the soil pores are partially filled with moisture of water and air, and the degree to which that soil can retain moisture depends on the characteristics of the particular soil. A collection of groundwater below the surface of the ground where saturation is reached is called an aquifer.

Mr. Walsh presented a hollowstem auger schematic that showed the drilling of a soil boring that could be converted into a groundwater monitoring well. The auger brings up soil on the outside of the auger, and the inside is where the sampling rod is lowered to collect soil or water samples.

Mr. Walsh then showed how a petroleum product would migrate down to the water table and accumulate on top of the water as a light non-aqueous phase liquids (LNAPL) due to a lower density than water. Petroleum would also solubilize into the water and cause a groundwater plume. He also gave a scenario where the chlorinated solvents which are heavier than water, sank through the water table, went through the same process as going to the unsaturated zone, got into the water table, continued to sink, and tended to accumulate in zones where there's less permeability.

Mr. Mach interjected that a floating LNAPL plume on the top of the water table is commingled with the chlorinated solvents or what are dense non-aqueous phase liquids (DNAPLs), is the condition that exists at Site 9 today.

Mr. Walsh showed a basic plume-groundwater cleanup schematic. The plume moves out from the source area primarily in the direction of the groundwater gradient. Recovery wells or monitoring wells would be placed down at the toe of the plume in order to cut off migration of the contaminants. An extraction system is then put in to keep it from moving, and that water is then pumped through a treatment facility. Another diagram showed a plume that was underneath a landfill, and in order to treat that contamination, nutrients, such as oxygen, and other nutrients were injected and that would flow with the gradient of the water and assist in breaking down that contaminant.

There were several questions raised about methyl tertiary butyl ether (MTBE). MTBE is an oxygenated additive to gasoline to help reduce air emissions. However, when leaked into groundwater, MTBE is very soluble, travels with the speed of groundwater flow, and is very difficult to remediate. There are no IR Sites at NAS North Island or NAB Coronado where MTBE has been detected.

Site 9 Soil Vapor Extraction with Steam Injection and Free Product Recovery Update-Richard Mach, SWDIV RPM

Mr. Mach presented an update on the Site 9 pilot test. Mr. Mach stated that the Navy has discovered some plugging (blockage) of the aquifer due to the steam injection, the cause has not been determined as to whether it was a biological concern, a chemical concern or a physical concern-although it appears to be a physical problem. It's believed that where the steam is being injected may be pushing some fine silt particles out of the soil matrix. He noted that some additional coring of the soil and samples have been taken, and additional piezometer monitoring wells that check for pressure gradients throughout the groundwater and in the soil have been added.

He explained the free product recovery, is working great. They have been able to remove a lot of the free product that's floating out at the site.

Ms. Fargo asked, "You say that you're detecting some plugging. How are you detecting that?"

Mr. Mach answered, "We couldn't get as much steam in."

Ms. Fargo added, "Has the recovery increased or dropped off or stayed the same?"

Mr. Mach answered, "The free product recovery has increased dramatically and it's meeting our expectations of increasing removed product."

Mr. Geilenfeldt asked, "Does this impact at all on the seepage into the bay?"

Mr. Mach answered, "This has not affected groundwater flow at all. It's not anticipated to affect groundwater flow. It can only really have a beneficial effect in that you're removing this source area."
NAS North Island Site Management Plan- Mr. Bill Collins, SWDIV

Bill Collins presented the Site Management Plan. He explained the purpose of the site management plan was to first meet the requirements of our Federal Facility Site Remediation Agreement (FFSRA). In addition to requiring the clean up of the sites, it requires a plan to manage a particular cleanup so that it can all be done in an orderly process with the state's supervision.

To ensure that all of the work gets done, near-term milestones would be established for each site. The plan estimates the project end dates. The contents of this plan mitigate the site and tell what the risks might be. A list of all of the solid waste management units, which are grouped in this case into operable units, is going to be available. It would show activities and give schedules for the corrective actions, including the regulatory process.

The plan would show the background of the site, typical facility information, information on the geology of the groundwater and environmental response actions that have taken place in the past. It would also show the FFSRA team organization, the master schedule, and an implementation plan.

Ms. Fargo asked, "Is this a report that you prepare every year or is this the first management plan to be prepared?"

Mr. Collins answered, "This particular plan, this is the first time we've done this Site Management Plan to meet these requirements, and this will be updated every year. That's one of the requirements of the FFSRA."

Once the site Management Plan is done, then a contract would be issued in the fall to revise it, to reassess all of the situations, evaluate the schedules, see how correct they are and evaluate the sites to see if something is known that wasn't known before. A copy of the plan would be made available on either a hard copy or a CD version. Mr. Mach added that the entire RAB would receive a copy.

NAS North Island and NAB Coronado IR Site Tour-Mr. Bill Collins, SWDIV
The site tour will begin at 9:00am at Building X. A continental breakfast will be served at about 8:00am. A paper tour of the island will be given first. After the NAS North Island part of the tour is completed, the tour will go to NAB Coronado. The tour will include some cleaned up sites, the industrial waste treatment plant, and Site 9-where a lot of activity taking place.

PUBLIC QUESTIONS AND COMMENTS
QUESTIONS

Mr. Geilenfeldt asked, "I was interested in this publication in "The Eagle" about the Site 5, Unit 2. Is this something we're going to be doing all the time?"

Mr. Collins answered, "Correct. Every time that we do a removal action where we're opening up our Administrative Record for a particular action-a cleanup action, we will post a notice, and we will announce that the Administrative Record is available for review; and generally at that same time we'll announce the availability of the Action Memorandum."

COMMENTS

Mr. Mach stated, "At the end of the last meeting we said we may or may not be ready to talk about Site 10, the Navy is going forward with the Engineering Evaluation/Cost Analysis (EE/CA). The preferred alternative is to cap the site and put a seawall as was previously discussed. A draft EE/CA will be sent to the regulators for their review to make sure everyone's bought into the concept before we go with a full public review; and then we'll also do the internal Navy routing and Navy review at the same time . We're hoping this is going to save some time, and we're going to try to coordinate with DTSC on this as well to come up with one complete review cycle."

Mr. Mach reminded everyone of the status update sheet of all IR work being done, which was not mentioned at the RAB meeting.

UPCOMING AGENDA ITEMS
An update on the Site 9 groundwater monitoring and porewater sampling, and the status of the Remedial Investigation (RI) report.

A presentation on the Site 11 RAP/ROD that we're working on and the focussed feasibility study.
A Site 9 update.

A status update of the NAB Coronado ecological risk assessment.

RAB UPCOMING MEETINGS, YEAR 2000
February 17th; March 16th; April 20th; May 18th, June 15th; No meeting in July; August 17th; September 21st; October 19th; November 16th; and, No meeting in December.

MEETING ADJOURNED
Ms. Fargo concluded the meeting, and the meeting adjourned at 7:55 p.m.